

REMARKS

Claims 1, 4, 6, 13 and 14 are amended to clarify that the nip with preset gap is a chilled nip. That the nip is chilled is specifically taught in the specification in paragraph [0016] the last sentence; in paragraph [0031] the last sentence; in the figures, figure 1 chill roll 5 and paragraphs [0039] and [0040]; and in paragraph [0042]. No new matter is therefore introduced by describing the nip in the claims as chilled.

Claims 1, 13 and 14 provide that the laminate is of substantially uniform and retained caliper exiting the chilled nip. Claims 1, 13 and 14 have been further amended to state "caliper is reduced by no more than 30%." That the thickness or "caliper is reduced by no more than 30%" is specifically taught in Applicant's paragraphs [0045] and [0046]. No new matter is therefore introduced by this amendment of claims 1, 13 and 14.

The examiner rejects claims 1 and 7 under 35 U.S.C. § 103(a) relying on Dontula et al. (U.S. Patent No. 6,447,976). This rejection is traversed and reconsideration requested.

Dontula et al. does not describe a preset gap. In one step Dontula et al. appears to compress the material as much as the material allows (column 8, line 8). Not only could this be variable in Dontula et al., but Dontula et al. also does not teach chilling the nip. Dontula et al. in column 8 lines 25-36 teaches reduction of the foam density from 20% to 95%, and preferably 40% to 70%, with no economical benefit attributed to even trying to reduce foam density less than 40%. Note that "reducing foam density" in Dontula et al. would mean foam is being expanded! Dontula et al. increases caliper. Reduction of foam density means caliper is being increased.

Contrast Dontula et al. with the invention. In paragraph [0046] applicant illustrates a thickness loss of only 8% and preferably not more than 30% and more preferably not more than 10%. Applicant clearly teaches a different invention of forming a laminate of substantially uniform and retained caliper. Dontula et al. clearly does not recognize the benefit of Applicant's process.

Regarding claim 7, which is dependent on claim 1, although Dontula et al. may disclose two rollers, Dontula et al. does not disclose Applicant's process of "...extruding a ... molten sheet of film ... to form a three layer laminate; *directing the at least three layer laminate into a chilled nip having a preset gap*; and pressing the layers of the at least three-layer laminate entering the nip into adherent contact as the molten film solidifies *to form a laminate of substantially uniform and retained caliper exiting the chilled nip such that the caliper is reduced by not more than 30%.*

Examiner rejects claims 1-14 under 35 U.S.C. § 103(a) relying on DeBraal et al. (U.S. Publication No. 2003/0021921) in view of Dontula et al. This rejection is traversed and reconsideration is requested in light of the amendments.

DeBraal et al. is the inventor's own earlier work and a priority document (10/167,463) to this application, commonly owned, and incorporated by reference.

In Item 7 of the Office Action, the rejection of claims 1-14 is made under 35 U.S.C. § 103(a) relying on DeBraal et al. in view of Dontula et al. In the second paragraph under item 7, the examiner states the reference is applicable under 35 U.S.C. § 102(a).

Although disclosing manufacture of containers and cups, the earlier DeBraal et al. publication cited by the examiner does not disclose the instant technique of directing a laminate into a chilled nip having a preset gap such that a laminate of uniform and retained caliper is formed.

Applicants enclose declarations by John Charles DeBraal and John MacKay Lazar. Pursuant to MPEP 715.01(a) and consistent with In re DeBaum, 687 F.2d 459, 214 USPQ 933 (CCPA 1982), the declaration of John Charles DeBraal establishes that the subject matter in U.S. Patent Application Publication No. 2003/0021921 relied on by the examiner, is the invention of the applicant herein. Although a disclaimer by the other co-inventor is not required, Applicants nonetheless submit a declaration from John MacKay Lazar, co-inventor with John Charles DeBraal of U.S. Patent Application Publication No. 2003/0021921. The declaration of John MacKay Lazar states that he did not conceive the method of forming a laminate of substantially uniform and retained caliper, and the product by process of forming a laminate of substantially uniform and retained caliper described in the claims of U.S. Patent Application Serial No. 10/645,486.

These declarations are more than sufficient to show that the reference relied on in the rejection is the subject matter conceived by the applicant herein.

Dontula et al. teaches away from the invention. Examiner's attention is directed to column 8 lines 25 to 27. This paragraph follows the section and paragraph cited by examiner. Note that Dontula et al. teaches density reduction of the foam core from 20% to 95%. The examiner's attention is directed to the fact that Dontula et al. is teaching an increase in caliper! Density reduction of a foam core means that the foam core is being expanded. Caliper is inversely related to density of foam. A reduction of foam density means an increase in caliper. Dontula et al. is expanding the foam.

Dontula et al. does not teach the invention. Dontula et al. teaches caliper expansion. Dontula et al. does not teach caliper reduction. Dontula et al. does not teach formation of a laminate "of substantially uniform and retained caliper."

Dontula et al. column 8, lines 4-17 does not teach, nor does the DeBraal et al. reference teach "*directing the at least three layer laminate into a chilled nip having a preset gap*" nor does either reference teach "pressing the layers of the at least three-layer laminate entering the nip into adherent contact as the molten film solidifies to form a laminate of substantially uniform and retained caliper exiting the chilled nip such that the caliper is reduced by not more than 30%."

Claims 4, 5, 6, 7 and 10 are dependent claims, and should be allowable in light of the amendment of the independent claim. Similar comment is expressed as to the balance of the dependent claims.

Although claim 11 has been cancelled, its limitations have been written into claim 1. The examiner's comments regarding claim 11 are traversed and disagreed with. Examiner asserts it would be obvious to use a preset gap, and obvious to chill the roll even though none of the references teaches use of either a preset gap or a chilled roll. None of the references teaches forming a laminate of substantially uniform and retained caliper exiting the nip. Dontula et al. teaches there is no motivation to manufacture a product with density reduction less than 40% (col. 8, line 36). A density reduction of 40% means Dontula et al. expands the foam at least 40%. There is no motivation then to combine Dontula et al. with DeBraal et al. None of the references teaches use of a "*chilled roll with preset gap to form a laminate of substantially uniform and retained caliper exiting the nip such that the caliper is reduced not more than 30%.*"

Regarding claims 13 and 14 examiner acknowledges that DeBraal et al. does not disclose the specifics of formation and lamination of multiple layer laminates. The examiner goes on to state that it would be obvious yet recognizes that "multiple extrusion operations would be difficult to plan and could result in variation in thickness of the extruded layers since both would be molten entering the nip and therefore capable of changing thickness."




The difficulty of planning such multiple extrusions to achieve substantially uniform and retained caliper is a sine qua non of the unobviousness of Applicant's process of *"directing the laminate into a chilled nip having a preset gap; and pressing the layers of the three layer laminate entering the nip into adherent contact as the molten polyethylene solidifies to form a laminate of substantially uniform and retained caliper exiting the nip such that the caliper is reduced by no more than 30%.*

Applicant thanks examiner for the thoroughness of the Office Action.

Early action allowing all claims is requested that this case can proceed to issuance.

If it would be helpful to resolution of any issues, the undersigned can be reached at 920-991-8661.


Respectfully submitted,


Benjamin Mieliulis
Reg. No. 29,675

Appleton Papers Inc.
Law Department
P O Box 359
Appleton, WI 54912-0359
920/991-8661

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I certify that this correspondence is being deposited with the US Postal Service with sufficient postage on September 6, 2005 addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P O Box 1450, Alexandria, VA 22313-1450.


Benjamin Mieliulis